Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer, said first storage system having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a secondary site which includes a second computer and a second storage system connected to said second computer, said second storage system having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system ~~records update history of data as a journal in a storage device~~ stores update data to be stored in said first logical volume into at least one of third logical volumes, and transfers said [[journal]] update data stored in said at least one of third logical volumes to said second storage system via said communication line in such a way that said second computer is not in a transport path of said [[journal]] transferred update data from said first storage system to said second storage system; [[and]]

said second storage system stores said transferred ~~journal to a storage device~~ update data into said second logical volume; and

said at least one of said third logical volumes is switched to another one of said third logical volumes during said remote copy process.

2. (currently amended) A data processing system according to claim 1, wherein said second storage system executes data recovery based on said stored [[journal]] transferred update data.

3. (canceled)

4. (currently amended) A data processing system according to claim [[3]] 1, wherein said switching is made at a time as designated by a user.

5. (currently amended) A data processing system according to claim [[3]] 1, wherein said switching is executed at a time when transfer of the logical volume in which the [[target journal]] update data for transfer to said secondary site is stored is completed.

6. (currently amended) A data processing system according to claim 1, wherein said transferred [[journal]] update data in said second storage system is stored in a plurality of logical volumes, and

while the [[journal]] update data is transferred to a certain logical volume, a transfer-target logical volume is switched to another logical volume.

7. (currently amended) A data processing system according to claim 6, wherein said switching is made at a time as designated by a user.

8. (currently amended) A data processing system according to claim 6, wherein said second storage system recovers data based on said stored [[journal]] transferred update data, and

said switching is made at a time when all logical volumes which store [[a journal]] update data used for recovery are recovered.

9. (currently amended) A data processing system according to claim 1, wherein said second storage system acquires information related to [[a journal]] update data recorded in said first storage system, and

said second storage system issues a command requesting said first storage system to send said [[journal]] update data.

10. (currently amended) A data processing system according to claim 9, wherein said [[journal]] update data recorded in a storage device of said first storage system is stored in a plurality of logical volumes,

a logical volume for storage is switched to another logical volume, while the [[journal]] update data is stored in a certain logical volume, and

said switching is made at a time when a command for requesting dispatch of said [[journal]] update data is received from said second storage system.

11. (currently amended) A data processing system according to claim 9, wherein said transferred [[journal]] update data in said second storage system is stored in a plurality of logical volumes,

a transfer-target logical volume is switched to another logical volume, while the [[journal]] update data is transferred to a certain logical volume, and

said switching is made at a time when said [[journal]] update data transfer is started at said first storage system.

12. (currently amended) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer, said first storage system having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a secondary site which includes a second computer and a second storage system connected to said second computer, said second storage system having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume; wherein,

said first computer and said second computer are connected to each other via a first communication line,

said first storage system and said second storage system are connected to each other via a second communication line,

said first storage system ~~records data update history in a storage device as a journal~~ stores update data to be stored in said first logical volume into at least one of third logical volumes,

said first computer acquires information related to said [[journal]] update data stored in said at least one of third logical volumes from said first storage system and transmits the information to said second computer via said first communication line,

said first storage system transfers said [[journal]] update data to said second storage system via said second communication line in such a way that said second computer is not in a transport path of said [[journal]] transferred update data from said first storage system to said second storage system, [[and]]

said second storage system stores the transferred ~~journal to a storage device~~ update data into said second logical volume; and

said at least one of said third logical volumes is switched to another one of said third logical volumes during said remote copy process.

13. (currently amended) A data processing system according to claim 12, wherein said second storage system issues a command requesting said first storage system to send said [[journal]] update data.

14. (currently amended) A data processing system according to claim 12, wherein data recovery in said second storage system is executed by a recovery program to be executed on said second computer based on said transferred [[journal]] update data.

15. (previously presented) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer; wherein,

said first storage system and said second storage system are connected to each other via a communication line,

said first storage system includes a first storage controller and a first storage device,

said first storage controller executes a journal acquisition program which records data update history in said first storage device as a journal, and a journal transfer program which transfers said journal to said second storage system via said communication line,

said second storage system includes a second storage controller and a second storage device,

said second storage control system executes a journal reflection program which recovers data based on a journal and a journal transfer program which receives said transferred journal from said first storage system,

when said journal is being transferred from said first storage system to said second storage system,

said first storage controller, while said journal is being stored in a certain logical volume of said first storage system, switches a logical volume for storage to another logical volume of said first storage device, and

said second storage controller, while said journal is being transferred to a certain logical volume of said second storage device, switches a transfer-target logical volume to another logical volume of said second storage device.

16. (previously presented) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system records update history of data as a journal in a storage device, and transfers said journal to said second storage system via said communication line; and

said second storage system stores said transferred journal to a storage device;

wherein said second storage system acquires information related to a journal recorded in said first storage system, and said second storage system issues a command requesting said first storage system to send said journal; and

wherein said journal recorded in a storage device of said first storage system is stored in a plurality of logical volumes, a logical volume for storage is switched to another logical volume, while the journal is stored in a certain logical volume, and said switching is made at a time when a command for requesting dispatch of said journal is received from said second storage system.

17. (previously presented) A data processing system according to claim 16, wherein said second storage system executes data recovery based on said stored journal.

18. (previously presented) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system records update history of data as a journal in a storage device, and transfers said journal to said second storage system via said communication line; and

said second storage system stores said transferred journal to a storage device;

wherein said second storage system acquires information related to a journal recorded in said first storage system, and said second storage system issues a command requesting said first storage system to send said journal; and

wherein said transferred journal in said second storage system is stored in a plurality of logical volumes, a transfer-target logical volume is switched to another logical volume, while the journal is transferred to a certain logical volume, and said switching is made at a time when said journal transfer is started at said first storage system.

19. (previously presented) A data processing system according to claim 18, wherein said second storage system executes data recovery based on said stored journal.

20. (new) A data processing system according to claim 1, wherein:

said at least one of said third logical volumes is switched to said another one of said third logical volumes at each time period.

21. (new) A data processing system according to claim 1, wherein:

said at least one of said third logical volumes is switched to said another one of said third logical volumes if update data stored in said at least one of said third logical volumes has been transferred.

22. (new) A data processing system according to claim 1, wherein:

said at least one of said third logical volumes is switched to said another one of said third logical volumes if amount of update data stored in said at least one of said third logical volumes is equal or over a value.

23. (new) A data processing system according to claim 1, wherein:

said second storage system stores said transferred update data into at least one of fourth logical volumes and reads said stored update data from said at least one of fourth logical volumes and writes said read update data to said second logical volume; and

said at least one of said fourth logical volumes is switched to another one of said fourth logical volumes.

24. (new) A data processing system according to claim 23, wherein:

said at least one of said fourth logical volumes is switched to said another one of said fourth logical volumes if said update data stored in said at least one of said fourth logical volumes has been written to said second logical volume.

25. (new) A data processing system according to claim 23, wherein:

said at least one of said fourth logical volumes is switched to said another one of said fourth logical volumes if amount of update data stored in said at least one of said fourth logical volumes is equal or over a value

26. (new) A data processing system, comprising:

a first storage system, in a primary site, coupled to a first computer and having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a second storage system, in a secondary site, coupled to a second computer and having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume;

wherein said first storage system receives update data sent from said host computer and stores said update data into said first logical volume and transfers said update data to said second storage system such a way that said second computer is not in a transport path of said transferred update data from said first storage system to said second storage system;

wherein said second storage system stores said transferred update data into at least one of third logical volumes and reads said stored update data from said at least one of third logical volumes and writes said read update data to said second logical volume; and

said at least one of said third logical volumes is switched to another one of said third logical volumes during said remote copy process.

27. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system records update history of data as a journal in a storage device, and transfers said journal to said second storage system via said communication line in such a way that said second computer is not in a transport path of said journal from said first storage system to said second storage system;

said second storage system stores said transferred journal to a storage device;

said journal recorded in the storage device of said first storage system is stored in a plurality of logical volumes; and

the journal is stored in a certain logical volume, a logical volume for storage is switched to another logical volume.

28. (new) A data processing system according to claim 27, wherein said second storage system executes data recovery based on said stored journal.

29. (new) A data processing system according to claim 27, wherein said switching is made at a time as designated by a user.

30. (new) A data processing system according to claim 27, wherein said switching is executed at a time when transfer of the logical volume in which the target journal for transfer to said secondary site is stored is completed.

31. (new) A data processing system according to claim 27, wherein said transferred journal in said second storage system is stored in a plurality of logical volumes, and

while the journal is transferred to a certain logical volume, a transfer-target logical volume is switched to another logical volume.

32. (new) A data processing system according to claim 31, wherein said switching is made at a time as designated by a user.

33. (new) A data processing system according to claim 31, wherein said second storage system recovers data based on said stored journal, and

said switching is made at a time when all logical volumes which store a journal used for recovery are recovered.

34. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system records update history of data as a journal in a storage device, and transfers said journal to said second storage system via said communication line in such a way that said second computer is not in a transport path of said journal from said first storage system to said second storage system;

said second storage system stores said transferred journal to a storage device;

said second storage system acquires information related to a journal recorded in said first storage system, and

said second storage system issues a command requesting said first storage system to send said journal;

said journal recorded in a storage device of said first storage system is stored in a plurality of logical volumes,

a logical volume for storage is switched to another logical volume, while the journal is stored in a certain logical volume, and

said switching is made at a time when a command for requesting dispatch of said journal is received from said second storage system.

35. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer; and

a secondary site which includes a second computer and a second storage system connected to said second computer;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system records update history of data as a journal in a storage device, and transfers said journal to said second storage system via said communication line in such a way that said second computer is not in a transport path of said journal from said first storage system to said second storage system;

said second storage system stores said transferred journal to a storage device;

said second storage system acquires information related to a journal recorded in said first storage system, and

said second storage system issues a command requesting said first storage system to send said journal;

said transferred journal in said second storage system is stored in a plurality of logical volumes,

a transfer-target logical volume is switched to another logical volume, while the journal is transferred to a certain logical volume, and

said switching is made at a time when said journal transfer is started at said first storage system.

36. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer, said first storage system having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a secondary site which includes a second computer and a second storage system connected to said second computer, said second storage system having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume; wherein,

said first storage system and said second storage system are connected to each other via a communication line,

said first storage system includes a first storage controller and a first storage device,

said first storage controller stores update data to be stored in said first logical volume into at least one of third logical volumes, and transfers said update data stored in said at least one of third logical volumes to said second storage system via said communication line,

said second storage system includes a second storage controller and a second storage device,

said second storage control system receives said transferred update data from said first storage system and recovers data based on said transferred update data,

when said update data is being transferred from said first storage system to said second storage system,

said first storage controller, while said update data is being stored in a certain logical volume of said first storage system, switches a logical volume for storage to another logical volume of said first storage device, and

said second storage controller, while said update data is being transferred to a certain logical volume of said second storage device, switches a transfer-target logical volume to another logical volume of said second storage device.

37. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer, said first storage system having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a secondary site which includes a second computer and a second storage system connected to said second computer, said second storage system having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system stores update data to be stored in said first logical volume into at least one of third logical volumes, and transfers said update data stored in said at least one of third logical volumes to said second storage system via said communication line; and

said second storage system stores said transferred update data to a storage device;

wherein said second storage system acquires information related to update data recorded in said first storage system, and said second storage system issues a command requesting said first storage system to send said update data; and

wherein said update data recorded in a storage device of said first storage system is stored in a plurality of logical volumes, a logical volume for storage is switched to another logical volume, while the update data is stored in a certain logical volume, and said switching is made at a time when a command for requesting dispatch of said update data is received from said second storage system.

38. (new) A data processing system according to claim 37, wherein said second storage system executes data recovery based on said stored journal.

39. (new) A data processing system, comprising:

a primary site which includes a first computer and a first storage system connected to said first computer, said first storage system having a first logical volume for storing data sent from said first computer, said first logical volume related to at least one disk drive in said first storage system; and

a secondary site which includes a second computer and a second storage system connected to said second computer, said second storage system having a second logical volume related to at least one disk drive in said second storage system, said second logical volume forming a pair relationship of a remote copy process with said first logical volume and storing data already stored in said first logical volume;

wherein,

said first storage system and said second storage system are connected to each other via a communication line;

said first storage system stores update data to be stored in said first logical volume into at least one of third logical volumes, and transfers said update data stored in said at least one of third logical volumes to said second storage system via said communication line; and

said second storage system stores said transferred update data to a storage device;

wherein said second storage system acquires information related to update data recorded in said first storage system, and said second storage system issues a command requesting said first storage system to send said update data; and

wherein said transferred update data in said second storage system is stored in a plurality of logical volumes, a transfer-target logical volume is switched to another logical volume, while the update data is transferred to a certain logical volume, and said switching is made at a time when said update data transfer is started at said first storage system.

40. (new) A data processing system according to claim 39, wherein said second storage system executes data recovery based on said stored journal.